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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,266	04/22/2004	Atsushi Koyama	P25239	6444

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RESTON, VA 20191

EXAMINER

O HERN, BRENT T

ART UNIT	PAPER NUMBER
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1772

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	12/26/2006	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 12/26/2006.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary

Application No.

10/829,266

Applicant(s)

KOYAMA ET AL.

Examiner

Brent T. O'Hern

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 November 2006 has been entered.

Claims

2. Claims 12-19 are pending with claims 1-11 cancelled.

WITHDRAWN REJECTIONS

3. The 35 USC 112, first paragraph, rejections of claims 2-6 and 9-11 of record in the Office Action mailed 21 July 2006, page 2, paragraph 6, have been withdrawn due to Applicant's amendments in the Paper filed 23 October 2006.

4. The 35 USC 112, second paragraph, rejections of claims 2-6 and 9-11 of record in the Office Action mailed 21 July 2006, page 3, paragraph 7, have been withdrawn due to Applicant's amendments in the Paper filed 23 October 2006.

5. The 35 USC 102(b) rejections of claims 9, 2-6 and 11 as being unpatentable over Tanaka et al. (US 5,541,910) of record in the Office Action mailed 21 July 2006, page 4, paragraph 8, have been withdrawn due to Applicant's amendments in the Paper filed 23 October 2006.

Art Unit: 1772

6. The 35 USC 103(a) rejection of claim 10 as being unpatentable over Tanaka et al. (US 5,541,910) in view of Takahashi et al. (US 5,859,834) of record in the Office Action mailed 21 July 2006, page 6, paragraph 9, have been withdrawn due to Applicant's amendments in the Paper filed 23 October 2006.

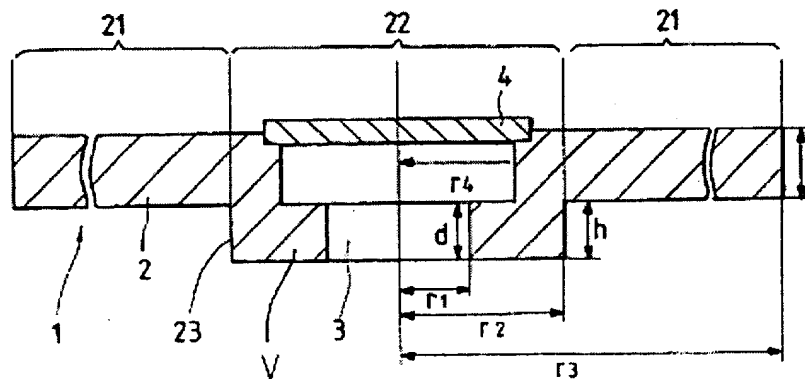
NEW REJECTIONS

Claim Rejections - 35 USC § 102

7. Claims 12-17 and 19 are rejected under 35 U.S.C. 102(b) as being unpatentable over Tanaka et al. (US 5,541,910).

Regarding claim 12, Tanaka ('910) teaches a recording medium preform, comprising: a first surface (*FIG-1, top surface of #1*) and a second surface (*FIG-1, surface with cavity defined by $r1$ and $r4$*);

FIG. 1



a circular cavity formed in the second surface (*FIG-1, cavity with radius $r1$*), comprising an inner base surface (*FIG-1, bottom portion of cavity wall $r1$ and col. 3, l. 66 to col. 4, l. 28*), and

Art Unit: 1772

a ring-shaped cavity formed in the first surface (*FIG-1, cavity with radius r_4*), a part to be punched out being located between the circular cavity and the ring-shaped cavity (*FIG-1, part to be punched out #4*), the ring-shaped cavity comprising:

a first inner wall surface having a diameter substantially equal to a diameter of an inner wall surface of the circular cavity (*FIG-1, wherein the diameter of #4 is equal to the diameter of the cavity of the recess within #22*); and

a base surface substantially transverse with the first inner wall surface (*See FIG-1 wherein the base below #4 is clearly transverse to the first inner wall.*), wherein a thickness of the part to be punched out, defined by a distance between the base surface of the ring-shaped cavity and the inner base surface of the circular cavity, is between 10 and 300 μm , inclusive (*col. 6, ll. 42-44 wherein 0.3 mm equals 300 μm*).

Regarding claim 13, Tanaka ('910) teaches wherein a corner formed by converging the first inner wall surface and the first surface is beveled (*See col. 4, l. 11 wherein the surface is "tapered", thus beveled.*).

Regarding claim 14, Tanaka ('910) teaches wherein the ring-shaped cavity has a depth in a range of 50 to 150 μm (*See col. 3, ll. 32-34 and FIG-1 "h" wherein the maximum height is 0.5 mm/500 μm .*).

Regarding claim 15, Tanaka ('910) teaches wherein the inner base surface is a surface of the part to be punched out (*FIG-1, #4*).

Regarding claim 16, Tanaka ('910) teaches wherein a temporary center hole is formed in a central part of the part to be punched out (*See FIG-1, #3 and #4 at center.*), the temporary center hole having a diameter smaller than the diameter of the inner wall

Art Unit: 1772

surface of the circular cavity (*FIG-1, wherein the diameter of the beveled portion $r1$ and smaller than $2*r2$*).

Regarding claim 17, Tanaka ('910) teaches wherein a protruding cylindrical ring circling the temporary center hole in a surface of the part to be punched out on a first surface side, the cylindrical ring (*FIG-1, #4 within recess*) comprising:

an outer diameter that is smaller than the diameter of the first inner wall surface of the ring-shaped cavity (*See FIG-1 wherein the outer diameter is smaller than the diameter of the first inner wall surface of the ring-shaped cavity of #4.*); and

a central axis that is coincident with a center of the temporary center hole (*FIG-1, wherein the axis are along the center of #22*).

Regarding claim 19, Tanaka ('910) teaches wherein the ring-shaped cavity comprises an outer circumferential surface of the cylindrical ring (*See FIG-1, ring-shaped cavity supporting #4.*), the base surface of the ring-shaped cavity converging with the first inner wall surface of the ring-shaped cavity and the outer circumferential surface of the cylindrical ring (*See FIG-1 and col. 3, l. 66 to col. 4, l. 30*).

Claim Rejections - 35 USC § 103

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (US 5,541,910) in view of Takahashi et al. (US 5,859,834).

Tanaka ('910) teaches a recording medium preform wherein the ring-shaped cavity comprises a second inner wall surface that converges with the base surface of the ring-shaped cavity (*See FIG-1 wherein the base surface supporting #4 converges with the cavity defined by $r4$*), the second inner wall surface being located between the

Art Unit: 1772

first inner wall surface of the ring-shaped cavity and an outer circumferential surface of the cylindrical ring (See FIG-1 wherein the second inner wall surface supporting #4 is between the outer ring bottom side of #2 when viewed from top to bottom.), however, fails to expressly disclose wherein the second inner all surface is tapered.

However, Takahashi ('834) teaches wherein the second inner all surface is tapered (See FIGs 8 and 11 and col. 7, ll. 1-36, wherein inner wall surface #105a is tapered.) for the purpose of accommodating a complimentary secondary surface (col. 6, ll. 27-33 and col. 3, ll. 18-23).

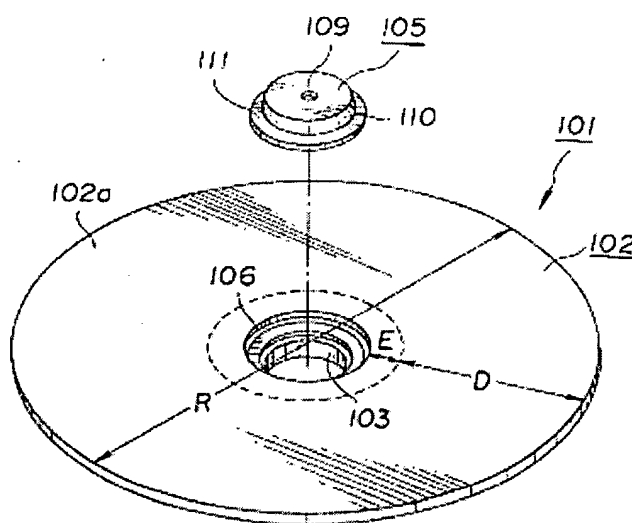
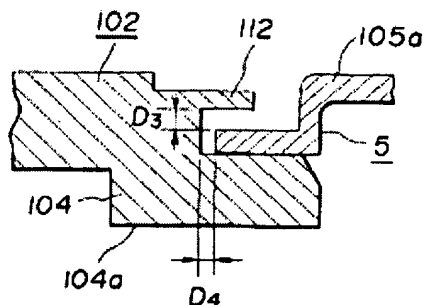


FIG. 8

**FIG. 11**

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to modify Tanaka's ('910) product with a second inner all surface being tapered as taught by Takahashi ('834) in Tanaka ('910) in order to provide a product that accommodates a complimentary secondary surface.

ANSWERS TO APPLICANT'S ARGUMENTS

9. In response to Applicant's argument (*p. 5, para. 4 to p. 6, para. 1 of Applicant's Paper filed 23 October 2006*) that the 112, 2nd para. rejection should be withdrawn, regarding canceled claim 5, and Applicant's assertion that the recess and diameter are clearly described in FIG-2 and page 34 of Applicant's Specification, it is firstly noted that that Applicant does not have a page 34. Perhaps Applicant means para. 34.

10. In response to Applicant's argument (*p. 6, para. 3 to p. 7, para. 2 of Applicant's Paper filed 23 October 2006*) that Tanaka ('910) does not teach newly presented claim #12, it is noted that Tanaka ('910) teaches a recording medium preform, comprising: a first surface (*FIG-1, top surface of #1*) and a second surface (*FIG-1, surface with cavity defined by r1 and r4*); a circular cavity formed in the second surface (*FIG-1, cavity with radius r1*), comprising an inner base surface (*FIG-1, bottom portion of cavity wall r1 and*

Art Unit: 1772

col. 3, l. 66 to col. 4, l. 28), and a ring-shaped cavity formed in the first surface (FIG-1, cavity with radius r_4), a part to be punched out being located between the circular cavity and the ring-shaped cavity (FIG-1, part to be punched out #4), the ring-shaped cavity comprising: a first inner wall surface having a diameter substantially equal to a diameter of an inner wall surface of the circular cavity (FIG-1, wherein the diameter of #4 is equal to the diameter of the cavity of the recess within #22); and a base surface substantially transverse with the first inner wall surface (See FIG-1 wherein the base below #4 is clearly transverse to the first inner wall.), wherein a thickness of the part to be punched out, defined by a distance between the base surface of the ring-shaped cavity and the inner base surface of the circular cavity, is between 10 and 300 μm , inclusive (col. 6, ll. 42-44 wherein 0.3 mm equals 300 μm).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-2172. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B T O

Brent T O'Hern
Examiner
Art Unit 1772
December 13, 2006

Nasser Ahmad 12/18/06
NASSER AHMAD
PRIMARY EXAMINER